procedure off R-peak times and fails to teach or suggest modifying R-peak times in any fashion.

Applicant previously pointed out that the cited sections of Burton (including the discussion regarding Figs. 48 and 49) teach techniques for accurately measuring R-peaks and variations therein and for modifying the R-peak times but does not teach adding or eliminating R-peak pulses to a heart beat signal.

With respect to Deno, Deno fails to tech what Geiser and Burton lack. To this end, instead of teaching elimination of R-peak pulses as suggested by the Office Action and as required by pending claim 1, Deno teaches the exact opposite. In this regard, Deno does not contemplate that an error in R-peak pulses could occur and instead only contemplates that a heart rate could deteriorate (i.e., a heart rate could slow down for a short time). Here, Applicant is clear that a slowing heart rate is not the same thing as an error in heart rate or R-peak pulse times. Not surprisingly, because a slowing or deteriorating heart rate is not an error, Deno fails to teach or suggest eliminating R-peak pulses or beats from the heart beat signal.

With respect to discarding RF parameter assessments as taught at Deno's column 21, lines 55-58, Deno teaches that a recirculation fraction (RF) parameter is a useful indicator of the state of heart failure and can provide an indication of the state of progression or regression of the heart failure through the comparison of RF parameter data collected over time. Here, it turns out that the RF parameter has to be determined when the heart beat is stable and regular (i.e., not when the heart is experiencing a temporary slow period) in order for the parameter to be accurate. Thus, one way to ensure an accurate RF parameter is to monitor heart rate while at the same time using the heart rate data to determine the RF parameter. Where the heart rate associated with the data used to determine the RF parameter turns out to be irregular or unstable, Deno teaches that the RF parameter (not the underlying heart rate data) can be discarded. This process is repeated until the heart rate associated with the data used to determine an RF parameter turns out to be regular and stable.

Thus, in short, Deno teaches discarding RF parameters when underlying heart rate data corresponds to irregular heart operation which is clearly different than eliminating R-peak pulses from a heart rate signal.

In addition, because Deno does not contemplate errors in R-peak pulse detections, Deno fails to teach or suggest the additional step of using the heart rate to determine when an R-peak error has likely occurred. Again, monitoring heart rate to determine when heat rate is irregular or unstable is different than determining when an error occurs. In fact, it is interesting to note that if Deno taught eliminating R-peak pulses when heart rate was unstable or irregular, Deno would in fact be generating false data instead of correcting for erroneous data.

For the above reasons Applicant believes claim 1 and the claims that depend therefrom are patentable over Geiser in view of Burton and further in view of Deno.

Applicant has introduced no new matter in making the above remarks. In view of the above remarks, Applicant believes the pending claims of the present application recite patentable subject matter and allowance of the same is requested. No fee in addition to the fees already authorized in this and accompanying documentation is believed to be required to enter this amendment, however, if an additional fee is required, please charge Deposit Account No. 07-0845 in the amount of the fee.

Respectfully submitted,

DARIN OKERLUND

Date: 4-12-05

By: _____

Michael A. Jaskolski
Reg. No. 37,551
Attorney for Applicant
QUARLES & BRADY, LLP
411 East Wisconsin Avenue
Milwaukee, WI. 53202-4497
(414) 277-5711